

Title (en)

System for controlling the focus of variable-focus lenses by detection of the spatial relationship of the eyes of a person

Title (de)

System zum Steuern der Fokussierung von Linsen mit einer variablen Fokussierung mittels einer Detektion der räumlichen Beziehung der Augen einer Person

Title (fr)

Système de commande de la focalisation de lentilles à focalisation variable à l'aide d'une détection de la relation spatiale des yeux d'une personne

Publication

EP 0837603 A2 19980422 (EN)

Application

EP 97305315 A 19970716

Priority

US 68801296 A 19960726

Abstract (en)

The focus of variable-focus lenses (11L, 11R) in eyeglasses (10) worn by a person (20) is regulated in accordance with an indication of a spatial relationship of the person's eyes (22L, 22R) to provide an at least partially in-focus image of a feature at which the person is gazing.. The lenses are nematic liquid crystal display devices. Light reflected off of each of the person's eyes is detected to provide data (40) indicating the respective dispositions of the person's eyes; and the combined data for both eyes is processed by a neural network (44) in a computer (12) to provide focus-control signals (42) for setting the focus of each lens. At least partially in-focus images are also provided of features at which a person is gazing (a) through goggles (54) of a three-dimensional virtual reality system, (b) on a monitor (62) that perceptually simultaneously displays different features with different degrees of focus as though they were at different distances from a person viewing the monitor, (c) on a monitor (76) displaying remotely generated images and (d) through a view finder (91) of a camera (86). <IMAGE>

IPC 1-7

H04N 5/74

IPC 8 full level

G02B 27/02 (2006.01); **G02C 7/08** (2006.01); **G02C 7/10** (2006.01); **H04N 13/00** (2006.01); **H04N 9/28** (2006.01)

CPC (source: EP US)

G02C 7/083 (2013.01 - EP US); **G02C 7/101** (2013.01 - EP US); **H04N 13/339** (2018.04 - EP US); **H04N 13/398** (2018.04 - EP US); **H04N 9/28** (2013.01 - EP US); **H04N 13/322** (2018.04 - EP US); **H04N 13/341** (2018.04 - EP US); **H04N 13/344** (2018.04 - EP US)

Cited by

FR2787204A1; CN104092935A; US6318857B1

Designated contracting state (EPC)

DE ES FR GB IT

DOCDB simple family (publication)

US 5861936 A 19990119; DE 69710017 D1 20020314; DE 69710017 T2 20021010; EP 0837603 A2 19980422; EP 0837603 A3 19980902; EP 0837603 B1 20020123; ES 2170919 T3 20020816; JP H10232364 A 19980902

DOCDB simple family (application)

US 89378897 A 19970711; DE 69710017 T 19970716; EP 97305315 A 19970716; ES 97305315 T 19970716; JP 21595097 A 19970725